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WISDOM IS COMMON SENSE TO AN UNCOMMON DEGREE

# THE REA LINEMAN

RURAL ELECTRIFICATION ADMINISTRATION

U. S. DEPARTMENT OF AGRICULTURE

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Washington, D. C.

## President Proclaims Farm Safety Week

### TWO MORE LOW VOLTAGE SHOCKS

I. A lineman working on a transformer pole forgot to ground the transformer case. Upon coming in contact with the ungrounded transformer case and the secondary rack he received an electric shock. It was necessary for a second lineman to free him from contact. The lineman fell 20 feet and ruptured a kidney.

II. A lineman working on a meter pole came in contact with 120-volt secondaries. The shock caused him to fall and break contact. His safety belt, which was in place around the pole, prevented him from falling backward; instead he slid down the pole.

A number of low voltage shock accidents were reported last year. One of these resulted in a fatality caused by the electrical shock. In the other low-voltage accidents the fall broke the contact but severe injury resulted from the fall.

We are all inclined to shrug off low voltage as "only 120 volts" -- we use it every day in our homes - we have even been nipped by it without disastrous results. The fact remains that under favorable conditions, moist contact and good ground, 120 volts will kill. It is not as spectacular as high voltage; it doesn't cause a flash or smoke to come from the body or clothing, or produce severe burns. However, it can cause

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### REA Linemen Can Help Eliminate Needless Accidents

President Truman has designated the week of July 21-27 as Farm Safety week to promote safety on the farm.

Farm Safety Week was instituted by the National Safety Council several years ago and has been observed each year since its inception.

National Safety Council figures indicate that in 1945 6,000 were killed in farm home accidents, 4,300 farm workers were killed on the job, and 4,300 were killed in motor vehicles. Other types of farm fatalities brought the total killed in farm accidents to 15,000. Also, 1,500,000 farm workers were injured and ninety million dollars worth of farm property was destroyed by fire last year.

The reduction of farm accidents is commendable from a humanitarian standpoint. It is doubly so when the saving of rural lives and property will increase our available food stocks and thus help save lives in war-ravaged countries.

REA linemen are contributing to farm safety by encouraging the safe use of electricity on over one million American farms. They are encouraging the safe use and handling of electrical wiring and appliances. They are also pointing out the hazards which result from broken conductors and other rural-line hazards. Many REA borrowers pub-

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for Employees of REA Systems

*David A. Fleming, Editor*

## - EDITORIAL COLUMN -

### Misuse of Tools Is Dangerous

Tools are designed for specific purposes. Tool-designers carefully select materials to meet the conditions under which the tools will be used. When tools are used on jobs for which they are designed and under conditions, and in the manner they are intended to be used, the lineman never gets into trouble. Misuse of tools eventually results in trouble.

The hot stick is eight feet long so that the lineman can perform the work for which it was intended at a point far enough below the phase wire to be out of reach of the energized line or fixtures. Also, at this distance, flash burns of the eyes are less likely. The lineman who "chokes-off" on the stick or saws off a section to make it easier to carry and handle must get so close to the phase wire or energized fixture that he may be blinded by a flash, or accidentally fall into or grab an energized conductor. An 8-foot hot stick provides protection, only when it is used properly.

Rubber gloves also afford protection only when they are properly used. Handling of voltages above 3,000 volts with rubber gloves is not safe. Rubber gloves, however, will protect the lineman against brush contacting or accidentally grabbing an energized conductor of as much as 7,500 volts.

The fact that tools have been developed to do live-line maintenance does not mean that this type of work is always safe. Live-line maintenance is safe only when performed by experienced crews, using proper tools in the proper manner and with favorable weather conditions. Two of the four fatalities on REA-financed lines so far this year occurred while the men were using live-line tools. The other two fatalities were caused by failure to use rubber gloves.

## Editor's Note:

Poles are being received loaded on flat cars in increasing numbers now that the war is over. Many REA borrowers are faced with the hazardous task of unloading poles from flat cars for the first time. For this reason, we are reprinting a job procedure for unloading poles which was worked out by Duke Bidle, Illinois Safety Supervisor and the Illinois Safety Committee. This method is safe, easy and does not damage or break the poles.

## TOOLS AND EQUIPMENT

1. Safety cable 50 to 60 feet long with strong hook fastened permanently on one end and strong hook on other end fastened with a clamp so that cable can be adjusted for length. Cable should be 5/8" flexible steel or larger.
2. Large snatch block with not less than 6" pulley and strong enough to hold the load.
3. One or more coffering or pull life hoists of 1-1/2-ton capacity or larger.
4. Set of rope blocks, two sheaves or more with good grade 3/4" rope or larger. (Optional if winch truck is used.)
5. Small hand tools as needed, such as cant hooks, axes, bars, bolt cutters and hand saw.

## INSPECTION

1. Inspect load to determine condition of stakes and bands and to see if load has shifted or is leaning. Check poles for length or class, number of poles on car and whether straight or crooked.
2. Inspect all tools and equipment and be sure they are in good condition.

## SAFETY PRECAUTIONS

1. Spot the car at the desired location, preferably on a level spot and as far away



from buildings and structures as possible. Set the brakes and block the car so that it will not roll unexpectedly.

2. Clear the grounds around the car and in the pole yard of rubbish and debris to prevent tripping and falling.

3. Place warning signs and danger flags along the track on each side of the car to prevent train crews from switching cars in and bumping the pole car and also to warn persons walking along the track.

4. Before starting to unload poles, it is well to put some cold cream, petroleum jelly or unguentine on the hands and face to prevent creosote burns.

5. Do not get in front of the poles at any time unless they are securely tied with safety ropes or stakes have been put into the stake pockets.

6. Keep in mind at all times that unloading poles is dangerous and you cannot afford to take chances.

7. Take time enough to be safe. Analyze every job and every situation on every car before starting to move a pole.

## PROCEDURE

1. Install safety sling around load and pull tight with coffering hoists. Hook the sling to the car on the unloading side about three or four feet from the ends of the poles. Put the middle part of the sling over the top of the load and down the back side to about two or three feet from the level of the bed of the car.

If the center part of the cable is not at this location, an adjustment can be made in the length of the cable at the adjusting end. Hook one or more coffering hoists in stake pocket at the back side of car and in the middle of the sling and pull tight.

2. Put up the skids for the poles to roll down on, being sure they are strong enough to support the load and are securely fastened at the car.

3. Install winch line at this time, placing truck on the unloading side well away from the car. Run the winch line over top of load and through a heavy and strong snatch block (hooked to the car at the middle on the back side) and hook into the middle of the sling and pull tight. If no winch line is available, use a set of heavy two-sheave blocks with about 3/4" rope or larger hooked to the same place as the winch line at the back of car.

Hitch the truck to the end of the fall line at a point where the rope will not cross any tracks and where the truck can be driven forward to let the load down. When the fall line is pulled tight by the truck, remove all stakes from the front or unloading side of car, then cut the shipping bands from the back side of the car and remove the coffering hoists from the middle of the sling.

When the hoists are removed, the men can get away from the load to a point where they can prevent anyone from walking in front of or behind it. When all is clear, drive the truck forward and let the load down. If winch is used, slack the winch slowly to let the load down.

4. After the poles have all rolled down of their own accord, inspect those still on the car to see if any are in a dangerous position or are apt to roll down. If so, roll them down before attempting to move any off the skids and pile them up.

5. Continue to roll them down and back onto the pile until they are all unloaded. Be very careful always to stay in a safe working position and work in a safe manner, taking time to analyze every situation before a pole is moved.

6. Clear the car of all stakes and wires, remove the skids, and then remove the flags and warning signs.

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## FARM SAFETY WEEK (continued)

lish safety items in their newsletters. The education of rural America in electrical farm safety cannot be accomplished overnight or in one week of intensive effort, for it is a 365-day-a-year job. Farm Safety Week will emphasize the need for making farm safety an every day affair.

The REA Lineman urges all its readers to cooperate with National Safety Council, and help make Farm Safety Week a success.

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## LOW VOLTAGE (continued)

a heart condition for which medical science has found no cure, and which always results in death.

Low voltage should be treated with respect. Who is able to determine, on the spot, whether there is enough perspiration on the hands or body to make contact dangerous? The low-voltage fatality last year happened to a lineman who merely touched the secondary with sweaty clothing.



## What's Wrong With This Picture?



## ANSWERS — What's Wrong With This Picture?

- |  |   |  |   |
|--|---|--|---|
| 1. Failure to stop tractor when oiling.                | 19. Shovel presents tripping hazard.                                      | 33. Stovepipe in window of home.                           | 49. Smooth patch on outside of tractor tire-tread.                    |
| 2. Sloppy sleeves around machinery.                    | 20. Boy riding on tractor.  | 34. Uprturned rake near house.                             | 50. Pump not braced.  |
| 3. Unguarded saw.                                      | 21. Turning sharply at high speed with tractor.                           | 35. Smoking in haymow.                                     | 51. No platform around pump.  |
| 4. Careless handling of log, endangering thumb.        | 22. Harrowing with tractor rear wheels in narrow position.                | 36. Door of haymow may fall on someone.                    | 52. Hose of fruit spray between man's legs liable to trip him.        |
| 5. Unbuttoned sleeves near saw.                        | 23. Tractor driver not watching where he is going.                        | 37. Faulty electric wiring near barn.                      | 53. Spraying trees after they have born fruit.                        |
| 6. Broken legs and supports on saw table.              | 24. Child riding on harrow.   | 38. Nails in board on ground.                              | 54. No guard rail on windmill.  |
| 7. Man at saw carrying sharp tools in pocket.          | 25. Failure to lead bull with a staff.                                    | 39. Broken ladder.   | 55. No braces on power plant of windmill.                             |
| 8. Double blade axe left unguarded.                    | 26. Broken fence.   | 40. Broken wheel on ground is tripping hazard.             | 56. No lightning rods on farm buildings.                              |
| 9. Axe with broken handle.                             | 27. Trees create blind entrance to highway.                               | 41. Spraying against the wind.                             | 57. No guards on wheels of tractor.                                   |
| 10. Sharp pointed hay fork on ground.                  | 28. Dangling electric wire over driveway.                                 | 42. Chimney on house too low.                              | 58. Seat missing from tractor.  |
| 11. Boy playing around water tank.                     | 29. Tree chopper let tree fall wrong way.                                 | 43. Rickety barn—roof sagging and whole barn in disrepair. | 59. Seat support on mower broken and inadequately repaired with wire. |
| 12. Unsanitary mudhole around tank—leaky water trough. | 30. Tree chopper's axe caught in tree because he is standing incorrectly. | 44. Barn stall in disrepair.                               | 60. Doubletree kingpin about to come out of mower.                    |
| 13. Unsanitary condition of well.                      | 31. Unsafe windmill could fall on someone.                                | 45. Ladder leaning against rotten barn roof.               | 61. No guards on gears of mower.                                      |
| 14. Working in front of mower.                         | 32. Pail resting on platform of windmill may fall off.                    | 46. Man in haymow too near opening—may fall out.           | 62. Reins dropped between horses attached to mower.                   |
| 15. Horses unprotected from flies.                     |   | 47. Manure pile poorly placed in front of barn.            |   |
| 16. Pick left sticking in ground.                      |   | 48. No safety blocks on saw-tractor wheels.                |   |
| 17. Broken handle on pick.                             |   |  |   |
| 48. Man overlifting.                                   |   |  |   |

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